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Putting The Market Back in Dairy Marketing

The current restrictions on milk supply and trade in Canada exceed what is needed to give efficient dairy farmers an opportunity to earn a fair return. A cap in support prices should be instituted and remain in place at least until a more meaningful benchmark for farm efficiency and more open export and interprovincial trade in milk, are achieved.

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The Study In Brief

Canada's system of dairy supply-management restricts the availability of milk to Canadian households, food processors and restaurants to maintain a higher price for milk and dairy products than Canadians would otherwise pay. The immediate beneficiaries of the system are Canadian dairy farmers who own production "quotas," without which any significant milk production is virtually forbidden.

The system is enabled at the federal level in several important ways. These include an often-discussed import tariff which effectively closes the door – beyond certain minimum access commitments made to our trade partners – to imported dairy products. Less well-known to Canadians are the *Agricultural Products Marketing Act*, which effectively delegates federal power over interprovincial trade and exports to the provinces, and the Canadian Dairy Commission (CDC), a federal Crown corporation. The CDC is the lynchpin of the system – helping the provinces coordinate and allocate production limits and set minimum support prices.

This paper asks whether the restrictions on milk production that are necessary to enforce prices correspond to the objectives of the CDC as set out in the legislation that created it, the *Dairy Commission Act*. These objectives are to provide efficient producers of milk and cream with the opportunity of obtaining a fair return for their labour and investment and to provide consumers of dairy products with a continuous and adequate supply of dairy products of high quality.

We argue that the current degree of restriction on Canadian milk supply is not necessary to meet these objectives. It is possible to provide consumers a more "adequate" supply of milk and dairy products without sacrificing the goal of providing efficient farmers with the opportunity to earn a fair return. A sharper focus on efficiency would also benefit the industry, where many are beset by debts and high quota values reduce industry dynamism by making entry difficult.

The paper recommends changes to the governance of the CDC that would bring consumer and industrial users' interests into decision-making, consistent with the regulatory set-up in many other industries. The paper further recommends a cap on support prices set by the CDC, until a reasonable benchmark is reached for an "efficient farm," using national and international comparisons. Finally, to help Canadian farms achieve such a level of efficiency the paper recommends that the federal government reclaim for itself the powers over export and interprovincial trade that it delegated to the provinces so that it can enable efficient farmers – who wish to operate outside of the quota system – to export outside of Canada and expand interprovincial trade.

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Milk supply-management practices in Canada have long been controversial due to their restrictions on the available quantity of milk and dairy products.

Many prominent commentators have called for the abolition of this system because production and import restrictions keep milk prices higher than they would be otherwise. As a result, a significant amount of income from the population at large is transferred to a dwindling number of dairy farmers.[1] Notwithstanding recent near-unanimous expressions of support for supply management on the part of the political class,[2] Canadians have an interest in orderly reforms that would increase the availability of milk and dairy products to those who need them, yet still provide a solid foundation for a thriving dairy farming sector and the communities it supports.

Studies that have called for supply management's outright abolition typically propose transition periods, during which more or less generous financial support for dairy farmers would apply as restrictions on milk production and imports are gradually loosened. In this *Commentary*, we recommend that, regardless of the ultimate fate of supply management, steps be taken now within the existing system to correct some of its most important negative effects. These measures would also make it easier for the dairy industry to adjust to any future comprehensive reform.

Specifically, we propose that the federal government:

- establish a better balance of consumer and producer interests in the Canadian Dairy Commission's governance structure;
- require a cap (reviewable under certain conditions) on support prices currently set by the commission for butter and skim milk powder; and
- reclaim some of the powers delegated to the provinces over trade in milk, powers that in provincial hands have perversely prevented farmers from expanding their business beyond their own province, thus negatively affecting the competitiveness of Canadian dairy farms.

The aim of our approach is to give the Canadian dairy farming industry a more robust set of incentives to strive for achievable efficiency gains. The core element of our proposal – a cap on producer prices – would persist as long as the productivity of the average Canadian farm operating within supply management remains below a reasonable benchmark.[3]

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1 Contemporary in-depth studies documenting these negative aspects and calling for the abolition of the system include those by Lippert (2001), Hart (2005), Goldfarb (2009), Robson and Busby (2010) and Hall Findlay (2012).

2 Hall Findlay (2012) is a notable exception.

3 Broadly speaking, productivity is the ratio of an output to the bundle of inputs required to produce it, while efficiency refers to the way producers use factors within their control – choice of technology, scale, and operating methods – to achieve a given level of productivity.

Over time, our plan would not only benefit consumers and other milk users but the dairy farming industry itself by focusing on its long-term competitiveness. Under this approach, milk supply management would remain dedicated to ensuring that domestic milk production meets demand at the capped price.

Beyond minimum access commitments made to Canada's trade partners, imports of milk and dairy products would, as now, be allowed only to fill the gap between domestic supply and the quantity demanded by consumers and industry. Competition safeguards could simultaneously be put in place to ensure that consumers, rather than intermediaries, benefit from the cap on farm-gate prices.

Our proposed reforms are consistent with the support expressed by federal political parties for the continuation of dairy-supply management. We expect that our approach will encourage a more competitive dairy farming industry to emerge over time, putting Canadian farmers in a position to benefit from the thriving international marketplace in milk and dairy products.

The Substance and Mechanics of Canadian Dairy Supply Management

The regulation of milk production, like that of many other Canadian farm products, is essentially and historically a provincial responsibility. Originally, governments established provincial milk marketing boards to redress the imbalance in market power between numerous dispersed and small dairy farmers and the handful of processors to whom they could sell their milk.[4] In addition, since certain features of milk production made its pricing more volatile than other products,[5] marketing boards implemented measures to help stabilize dairy farm incomes. To the extent these concerns remain valid today, any reformed system should continue to address them.

Because provinces cannot impose tariffs or other physical barriers to trade, effective control of provincial milk markets also requires that federal authority over interprovincial trade be delegated to the provincial boards. This is achieved, for milk as well as for other supply-managed commodities, through Canada's *Agricultural Products Marketing Act*. This legislation allows the federal government to grant authority to any provincially authorized board to regulate the marketing of an agricultural product in "interprovincial and export trade and for those purposes exercise all or any powers" they can exercise within the province (Canada 1985a, s. 2. (1)).

The dairy industry has changed dramatically since the first milk marketing boards were established in the 1960s. Now, milk and dairy products can be transported over greater distances than before. At the same time, the operations of commercial buyers of milk are being increasingly rationalized across the country. In light of these trends, provincial boards have increasingly collaborated in setting revenue and market-sharing agreements, known as "pools," and thus increasingly coordinated pricing decisions. Farmers receive a blended price, effectively equalizing prices across various uses (classes) of the milk and across provinces

4 See Doyon (2011, p.13). The formation of cooperatives was seen as an effective way for farmers to negotiate favourably with their suppliers, but not with their customers (McMurchy 1990, p.1).

5 Doyon (2011, p.7; also p.18 and pp. 20-22), discussing responses to the 2009 crisis in US dairy farming, cites "the perishability of the product and the short-run incentive to increase production in order to maintain revenues when prices are declining," given the large fixed investments and the significant time lags between market signals and the ability to alter production.

participating in the pools.[6] Provincial boards meet under the aegis of the Canadian Milk Supply Management Committee (CMSMC), chaired by the Canadian Dairy Commission (CDC), a federal Crown corporation, to devise a periodically updated National Milk Marketing Plan.[7]

Key Features of Dairy Supply Management

Under supply management, provincial marketing boards set the price for "fluid" milk – namely, milk destined for household consumption. This milk is perishable and its trade is local in nature, attracting the highest price among all classes of milk. Under the two-year formula agreed to by the CMSMC in October 2011, 50 percent of any increase in fluid milk prices is based on increases in dairy-farm production costs (determined though a survey of farms and using a formula which excludes very high- or very low-cost farms), and the other 50 percent is based on increases in Canada's consumer price index. Provincial boards then set limits on the production of fluid milk within each province, so that supply matches the demand expected at the price derived from the formula.

Concurrently, the CDC sets "support prices" at which it will be willing to buy or sell butter and skim milk powder, which are "buffer commodities" produced to prevent excess fluid milk production (Doyon 2011). In turn, CDC support prices guide the provinces in pricing the entire "industrial" milk class destined for use in the manufacture of butter, cheese, ice cream, yogurt and milk powders. Given the greater ease of interprovincial industrial milk trade, the CDC sets an overall national limit on the quantity that can be produced. This limit is set to match expected overall Canadian demand at the prices the CDC wishes to support. The CMSMC then allocates the product among provinces according to a formula that allows some shift over time toward faster-growing provinces.

These calculations, respectively for fluid and industrial milk-production targets, yield total milk production allowed in each province, which is then distributed only to quota-holding farmers. Total quota allowed can increase or decrease depending on the overall output target. Provincial dairy boards granted most existing quotas, without charge, to farmers upon the establishment of supply management. Since then, a small amount of new quotas may be introduced to new farmers, as approved by provincial dairy bodies. But most new entrants must purchase quotas from willing sellers through computerized exchanges.

Provincial marketing boards enforce the milk production quotas necessary to sustain the price of milk. They have extensive powers – including the use of heavy penalties – to punish any Canadian producer who tries to sell milk without holding the appropriate quotas.

The CDC, as chair of the CMSMC, facilitates and supports interprovincial and federal-provincial cooperation. Such collaboration is necessary to allow marketing boards to exercise their regulatory control over prices and to override what would normally be a constitutional prohibition of interprovincial trade barriers.[8]

6 The two pools covering revenues from all classes of milk are dubbed the P-4, encompassing the four western-most provinces, and the P-5, encompassing Ontario, Quebec and the Maritime provinces.

7 Many facts referred to in this and subsequent paragraphs are culled from Froment (2012).

8 Constitutionally speaking, it is well established that Canadian provinces can regulate production within their jurisdiction. However, since the object of controlling dairy production is mainly to control prices, which may require limits on imports from another province, provincial schemes have to be interpreted as being part of a national orderly marketing scheme if they are not to run afoul of Section 121 of the *Constitution Act*, 1982. This requires federal involvement in the scheme and, arguably, the consent of all the provinces (see opinion of Pigeon J, in *Agricultural Products Marketing Act* reference to the Supreme Court, *1978 2SCR 1198*).

Beyond empowering the CDC, the federal government exercises a crucial role in preventing milk and dairy product imports. For quantities over minimum access commitments made under trade agreements (quotas reserved for imports at a low tariff rate), Canada maintains prohibitive tariffs on milk and dairy products to exclude lower-priced imports.[9]

Because the federal role is essential in allowing provincial boards control over milk trade and, hence, prices and because the CDC is the linchpin of this role and of Canada's supply-management system, we now turn to an examination of how the CDC manages the system in light of its stated objectives.

Goals of The Canadian Dairy Commission

According to the *Canadian Dairy Commission Act* the commission's mandates are "to provide efficient producers of milk and cream with the opportunity of obtaining a fair return for their labour and investment and to provide consumers of dairy products with a continuous and adequate supply of dairy products of high quality." (Canada 1985b, s. 8). In this and the next section, we evaluate whether the current supply restrictions on milk and dairy products are necessary to achieve these objectives.

Continuous Supply of High-Quality Dairy Products

Clearly, Canadians desire a stable supply of high-quality dairy products. But since myriad other food products offer continuity of supply and high quality without the type of permanent supply restrictions embedded in Canada's dairy supply management, the current supply-management regime is not essential to ensuring a continuous supply of high-quality milk.[10]

A Fair Return for Efficient Farmers

The "opportunity to earn a fair return" is an important element of rate- or price-setting in many regulated sectors, both in Canada and abroad. It is a frequent element of so-called "regulatory compacts" that involve industry, a regulator and consumers. These arrangements often seek to limit the price suppliers can charge, relative to an unregulated situation. At the same time, regulatory compacts recognize that unless suppliers of the good or service are able to earn a fair return – typically defined as the return on a comparably risky investment elsewhere in the economy – supplies would tend to underprovide the good or service and not make otherwise desirable capital investments that would encourage supply increases to meet demand.

For example, some rent control systems provide the owners of rental units the opportunity to earn a fair return, as an incentive to maintain the housing stock. In the case of utilities operating as a natural monopoly – which would tend to maximize profits by overpricing and underproviding the service – the regulator often seeks to limit the price the utility can charge, while also setting the price not too low

9 Some minor exceptions include food processors being allowed to apply for additional quantities at low tariff rates, for example at times of shortage, and imports coming in through an import and re-export program, which food processors can use only as inputs into processed goods that will be exported.

10 For example, the Canadian ban on the use of growth hormones to increase milk production, which was implemented due to concerns about animal welfare, exists independently of the existence of milk supply-management restrictions. There is no such ban in the United States, but there is in that country a significant distinct market for milk from farms that claim not to treat cows with growth hormones, again without constraints on the overall milk supply.

as to deny the opportunity for utility owners to "earn a fair return" on their investment.

The way the concept of "opportunity to earn a fair return" is applied in Canadian supply management, however, is unlike that in any other regulated industry. The fair-return principle in dairy is applied without regard to its impact on consumers and other milk users. While the CMSMC consults with non-farm sectors, including the Consumers' Association of Canada and the Dairy Processors Association of Canada as nonvoting members, these non-milk-producing parties have little say in CDC decisions. The Consumer Association's claims that the CDC is overstepping its mandate on setting milk prices (Consumers' Association of Canada 2003) have been ignored. While consumers might arguably be willing to indirectly support dairy farmers, the current extent of this support is not transparent, and consumers currently have no real say in determining a reasonable level of support.

Indeed, the *Canadian Dairy Commission Act* requires the federal Minister of Agriculture and Agri-Food to appoint a diversified advisory board, but this has not been done, as pointed out in a 2011 report by the Office of the Auditor General of Canada. The report also expressed concerns that the three-person composition of the commission itself might not allow the range of skills needed for good governance of such a complex system.

When applying the concept of opportunity to earn a fair return, the CDC does not take into account the interests of consumers, and only exceptionally takes into account the interest of other users of milk in competitive prices and expanded supply. Nevertheless, the CDC, in seeking to meet its legislated objectives, could move towards a more balanced consideration of interests other than those of milk producers, as is done in other regulated industries. It could, for example, more rigorously define the "efficient farmers" who are entitled to have their costs covered in pursuit of the "fair return" objective – an issue we will turn to in the section on current dairy farming dynamics and in our recommendations.

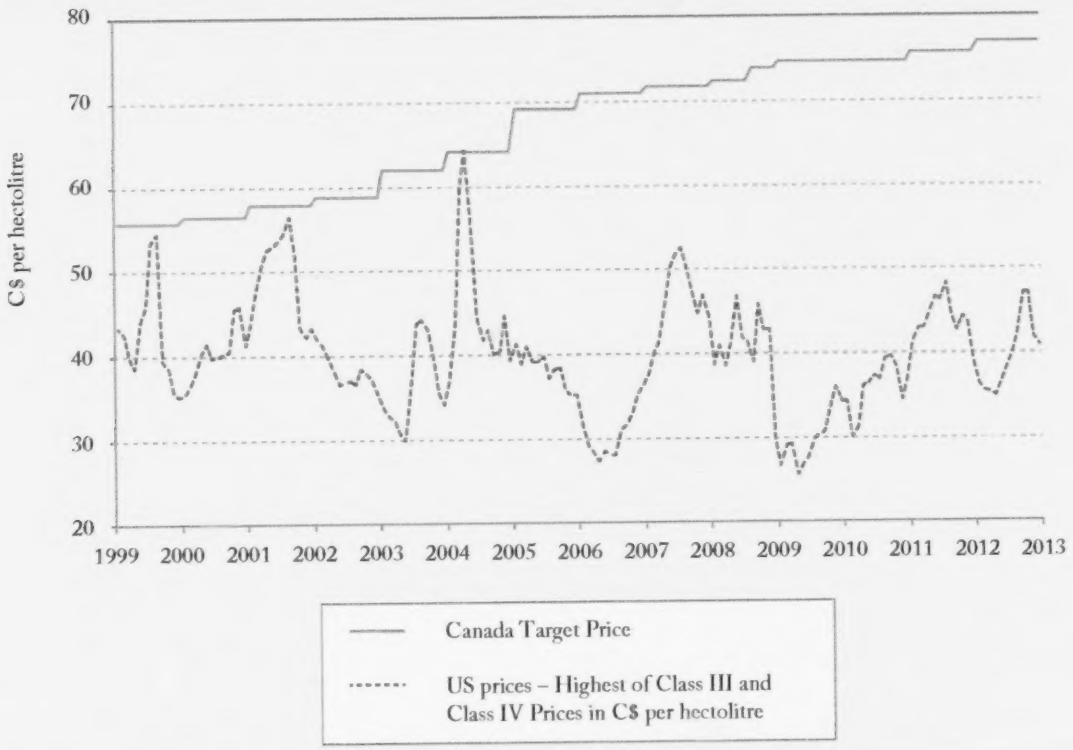
It is furthermore possible to provide efficient farmers an opportunity to earn a fair return other than by the current formula that guarantees a price that covers a blend of their input costs and cost-of-living increases. For example, models of "incentive regulation" such as "price-cap" regulation are increasingly prevalent in other regulated industries, because they arguably create better incentives for efficiency gains than the cost-plus price regulation prevailing in the Canadian dairy industry.[11] Such a model could be devised for the Canadian dairy industry, encouraging more affordable and plentiful supply through efficiency gains, while still giving the efficient producer an opportunity to earn a fair return. We conclude that the current system is more restrictive than necessary to achieve the objective of providing efficient producers a fair return for their labour and investment.

Listen to What Demand Says

Since the current milk-supply restriction is over and above what is necessary to ensure a continuous supply of high-quality products and to provide efficient farmers the opportunity to earn a fair return, perhaps the restriction is necessary to achieve the remaining CDC objective – that of providing an adequate supply to consumers. For example, the *Ontario Milk Act's* key purpose "to stimulate, increase and improve the producing of milk within Ontario," suggests a straightforward focus on improved supply, which would benefit consumers. Unfortunately, it supports Ontario

11 See, e.g., den Hertog (2010, pp. 38-41), Joskow (2006) and Sappington (2000).

Figure 1: Evolution of Milk Prices in Canada and the United States, 1999–2013



Note: Canada Target Price is a reference price calculated by the CDC meant to represent what a milk producer receives for one hectolitre of milk used in making butter and skim milk powder. In the United States, class III milk is used for making cheese, among other products, and class IV milk is used to manufacture butter and nonfat dry milk.

Source: Froment (2012) and CDC data, gratefully acknowledged.

supply by restricting consumers and manufacturers of dairy products from buying from other, lower-priced sources.

This discrepancy between the tightly controlled price paid for milk in Canada and the price that prevails in a less restricted market – from which Canadians could import were it not for supply management – is illustrated in Figure 1. Over the last decade, Canadian dairy prices have been much more stable, but consistently higher than US prices translated into Canadian dollars.[12] In comparison, there was near-equality between Canadian and US

12 The figure tends to understate the widening of the gap between the pre-2005 period, when the Canadian dollar was trading below purchasing power parity, and the post-2005 period, when it rose above it. Nevertheless, on average, it gives an accurate idea of the gap and its persistence.

Table 1: Comparison of Selected Dairy Product Prices, February 2011

	2% Milk (base 4 litres)	Cheddar (base 300g)	Butter (454g)	Yogurt Yoplait (base 4×100g)
	Canadian prices in C$, US prices in US$			
Montreal	5.81	6.99	5.69	2.49
Toronto	5.59	7.89	5.99	3.12
Calgary	4.49	6.39	6.69	3.12
Victoria	5.19	7.44	5.99	3.49
New York upstate	3.16	4.76	3.99	1.41
San Francisco	4.64	4.76	5.49	2.12
Atlanta	3.54	5.28	4.59	1.76

Note: San Francisco has some of the highest milk prices in the United States and is not representative of prices in that country. But as can be seen from the table, retail prices even in San Francisco tend to be lower than comparable prices in Canada. The snapshot of US and Canadian dairy prices shown in this table was taken during a month when the CAN/US exchange rate was at par.

Source: Doyon (2011, 49).

industrial milk prices before the introduction of Canadian supply management reached its current form in 1972 and 1973 (Barichello et al. 2013), when the currencies of the two countries were roughly at parity.

This artificially created difference in milk prices at the farm gate, of the magnitude that exists between Canada and the United States, with Canadian prices recently hovering at almost double the comparable US prices, has a strong impact on retail price differences, not just on milk but also other dairy products. Indeed, a snapshot of the retail price of milk and dairy products shows they are much higher in Canada than in the United States (Table 1).

Protection against foreign competition, via the imposition of prohibitive tariff rates above a certain import quota, also extends to processed dairy products that could not otherwise be manufactured competitively in Canada, due to the high price of milk.[13] This protection up the value chain ensures comfortable margins for everyone involved, which means that consumers and other users such as restaurateurs, who do not enjoy similar protection from competition, ultimately bear the brunt of higher farm-gate prices. As the ultimate expression of this phenomenon, minimum milk retail prices in Quebec and Nova Scotia are enforced and "periodically adjusted so that every agent along the supply chain can take a margin" (Larue 2012, 9). These artificially high prices have a deleterious impact on consumption. Estimates of demand elasticity of milk and dairy products, while sparse and complicated by consumption shifts to

13 This protection can and has been tightened whenever new imports threaten to lower the cost of dairy products in Canada, as happened in 2008 with new prohibitive barriers instituted against imported milk protein concentrates, which were increasingly substituted for milk in cheese manufacturing (Doyon 2011, p.8 and Shields and Hanrahan 2010, pp.7-8).

substitutes such as soy and almond milk, clearly suggest that purchases of milk and dairy products would increase with lower prices.[14] Yet according to Dairy Farmers of Canada, the voice of Canadian milk producers, two out of three Canadians are not getting their recommended servings of milk products.[15]

Looking at the impact of restricted milk supplies on consumers, therefore, one would be hard-pressed to conclude that CDC practices are achieving the "adequate supply to consumers" objective.

Impact on Other Users

Employment in both services and manufacturing industries that use milk continues to be negatively affected by the current restrictions on milk availability. Most notorious is the discriminatory treatment of restaurants that are not able to access cheese at the same price as a key competitor – the frozen pizza manufacturers.[16] In addition, partly as a result of supply restrictions, Canadian milk processors are increasingly expanding in the United States to take advantage of its lower input costs (Dobson and Jesse 2010).

While the higher costs imposed by supply management on consumers and other milk users have featured prominently in studies extolling the need to reform supply management, the question of the increasingly damaging consequences of the current policy on the dairy farming industry itself has been far less prominently discussed.

Dynamics of Canada's Dairy Industry

We believe that incremental changes to the current supply-managed dairy industry could improve competition among dairy farms and support the expansion of productive farms while avoiding rapid declines in their quota values. This can be accomplished with improved industry-wide productivity and an improved ability to tap into growing dairy markets abroad.

Trade and Productivity

Before the supply-management system emerged in the 1960s, Canada was a net exporter of milk. Since then, the dairy markets to which Canada had access have undergone sea changes that were at first, and in many instances continue to be, unfavourable to Canada. For example, the 1973 entry of the United Kingdom into the European Economic Community, followed by a ramping up of European agricultural protectionism, closed what used to be an open door to Canadian imports. These developments helped spur calls for support for dairy farmers that led to the current system (Doyon 2011).

However, there is currently a booming global milk market (OECD/FAO 2012), particularly in Asia, from which Canadian milk producers are excluded. The World Trade Organization (WTO) has concluded that Canadian dairy practices in effect constitute a subsidy to farmers, and WTO members have agreed to limit exports of such subsidized farm products. Thus limited, the bulk of Canada's exports are comprised of surpluses of the nonfat portion of the milk, which is less in demand than the fat portion, and which the CDC buys at discounted prices from farmers to sell to animal feed lots, or to export it, mainly to Cuba and Mexico.

14 For example, Li and Ker (2011) calculate elasticities (percentage change in purchased quantity with a 1% change in price) of -0.57 for fluid milk and -0.52 for industrial milk. Their estimates are well within the bounds set by earlier studies.

15 See www.dairygoodness.ca/getenough.

16 This is due to a special-class permit system allowing privileged prices, depending on end use for purchasers of industrial milk or processed dairy products.

Canadian dairy farmers could, according to international trade rules, set up operations for exports only, as long as they operate outside the supply-management system. However, with the acquiescence of Ontario regulators, the Dairy Farmers of Ontario were able to effectively block exports by farmers who do not own dairy quotas. This is unfortunate because Canadians should be able to assess how internationally competitive Canadian dairy farmers can be outside of the supply-management system. This state of affairs is a consequence of the delegation of federal authority over export trade to the provinces – a power the federal government should reclaim for the purpose of allowing Canadian dairy farmers outside the system to export.

Priming Dairy Markets for More Competition

In recent years, Canada's key trading competitors have transitioned their dairy farming systems toward more open markets. Notably, in the United States support prices for key storable dairy products since the 1990s have been redesigned to more closely reflect market prices (Blayney and Manchester 2001). The impetus has been to bolster direct income-support programs such as the Milk Income Loss Contract (MILC) program, introduced in 2002, which compensates participating American dairy producers when milk prices fall below a certain level.[17]

For its part, the European Union plans to eliminate national quotas and largely move to world prices for milk and butter by 2015 while also bolstering its direct support programs for dairy farmers (Doyon 2011). As a result, these competitors are now better positioned to take advantage of the growing global market.[18]

In the meantime, the Canadian market, to which our producers are essentially confined, stagnates, in part because of the high cost of dairy products. This high cost is only partly the result of differences in the cost of inputs between Canada and comparable jurisdictions.

Most ominously, although the productivity of Canada's dairy farms has increased over time, they are not nearly as productive as they could be. One important reason why is that they remain smaller than their US counterparts (in comparable regions), in an industry in which economies of scale are, up to a certain size, important. The average Canadian dairy farm has 76 cows, compared to 100 in Wisconsin and Maine and 200 in Vermont (Doyon 2011, 51).

Economies of scale are not only a matter of herd size: farmers must also be willing to invest in technologies that enable economies of scale to kick in (Mosheim and Lovell 2009). As in every other economic sector, technological improvements are a major factor in the ability to reduce costs. Such improvements are achievable in dairy as in other industries.[19]

17 For a useful review of the MILC program and its impact, see D'Antoni and Mishra (2011). It should be noted that the United States also maintains a tariff-rate quota system for imports, as without import restrictions it is not possible to maintain prices in any market above potential import prices. However, the subsidy provided to US farmers under this system is markedly less than that which Canadian consumers are transferring to Canadian farmers, according to OECD data.

18 For example, US commercial dairy exports have grown significantly since 2000, even as the US Dairy Export Incentive Program, meant to allow dairy product exporters to buy at US prices and sell abroad at lower international prices, has been winding down.

19 See Charlebois and Astray (2012) for advantages that Canadian dairy farmers could better exploit and Everly (2012) for a specific example of achievable technological improvements.

With respect to incentives to innovate and seek new markets, the report of the *Commission sur l'avenir de l'agriculture et de l'agroalimentaire québécois (Pronovost Report)* stated:

> The systems in place create obstacles to new types of agriculture, to the development of innovative products, and the exploration of new commercial opportunities. These systems are built on a dominant agricultural model where everything is linked to a protectionist vision of the sector...which limits the sector's capacity to explore its potential and constitutes an increasingly antiquated shield in a world of economic openness. (Provonost 2008, 16.)

Analysts also point to Canada's regionally fragmented production system as a major barrier both to achieving economies of scale (Doyon 2011, Larue 2012) and to allowing Canadians with more efficient farms to benefit from a national market.[20] Indeed, getting rid of internal market fragmentation has been a key driver of reforms for improved efficiency in Australia, the EU and the United States.

The upshot is that there are significant efficiency gains to be had in the Canadian industry, when compared strictly to jurisdictions that are similar with respect to, for example, climate.[21] Furthermore, Canada is almost unique in the world as a place where those efficiency gains that have occurred have not translated into lower dairy prices in real (after-inflation) terms (Barichello et al. 2013).

The Problem of Quota Values

In Canada, dairy farmers enjoy comparatively strong financial support from government policy,[22] mainly in the form of high prices forced on consumers and users of milk and dairy products, translating into a higher flow of income to farmers.

Fundamentally, the quota value is based on the income flow attached to the assigned quota. However, many other factors influence the value of dairy quotas. Barichello et al (2007) and Meilke and Cairns (2011) estimate that factors such as the decline in real interest rates, expectations that farmers will be compensated for any losses in quota values resulting from policy changes and a relaxation of bank-lending constraints[23] helped drive the extraordinary recent rise in quota prices – more than doubling in value in Ontario between 1997 and 2007 (Mussell et al., 2012, figure 10).

In turn, high values for quotas – which normally have to be purchased by new farmers – have proven to be a formidable barrier to entry into the industry (Doyon 2011), a cost that new entrants, who typically aim to exploit a productive edge, must overcome. As a result, industry debt levels have grown even faster than farm equity, including equity represented by the value of quotas (Barichello 2007).

The factors resulting in low dairy farm productivity and low rate of entry into the sector are debated intensely within the farming industry.[24] In Quebec,

20 For a study of interprovincial differences in the efficiency of dairy farms, see Jeffrey and Richards (1996).

21 For example, milk production per cow is considerably larger in Wisconsin than in Canada (Dobson and Jesse, 2010, p.16), though both have increased significantly since the early 1990s; New York dairy farms have been found significantly more efficient than Ontario farms (Slade 2011); and Quebec farms exhibit noticeably smaller scale, production per cow and labour productivity than those in comparable jurisdictions in the United States and Canada (Nolet 2005).

22 The OECD estimates that in 2011, 43 percent of prices received by Canadian dairy farmers at the farm gate was accounted for by supply management and, secondarily, by other forms of support for dairy farming. This figure is practically unchanged from 10 years earlier. The equivalent figures for the United States are 4.5 percent (from 45 percent a decade earlier) and 2 percent (from 28 percent) for the European Union (OECD 2012).

23 The last two factors probably linked closely to the perceived political support for the industry following the conclusion of the Uruguay Round of trade negotiations that created the WTO.

24 See, for example, Belzile (2003).

for example, experts speak of three historical phases: subsistence agriculture, specialized agriculture and "indebted" agriculture – and of a world in which physical security is being replaced by psychological distress as a result of the current system (Carle 2010). Bank analysts, among others, have warned that quota values could become highly volatile in the future and are urging farmers to be more conservative. Analysts are, at the same time, railing against the aggressive lending practices of Farm Credit Canada, which they say put farmers at risk of being over-indebted (Laprade 2011).

Farmer associations are also grappling with the problems caused by high quota values. Provinces belonging to the P5 imposed caps in quotas in 2009 but these are a highly inefficient way of transferring value from existing to new producers, because they reduce the number of quotas changing hands (Meilke and Cairns 2011). There are, in short, many more people who want to enter into dairy farming than can do so as a result of having to first acquire quotas and because of the limited quota availability.

As pointed out by Cairns, Meilke and Bennett (2010, 22), "the first best policy that every economist would mention in order to lower quota prices is to lower the milk price" that underlies the value of the quota. Trouble is, rapid decreases in milk prices, or even decreases to expected future prices, can cause quota values to plummet. But capping milk prices should help gradually restore liquidity to the quota market and make quotas more accessible to new entrants.

As discussed above, capping prices is also a means to force the industry to both capture potential efficiency gains and to pass those onto consumers. For that reason, and to restore some liquidity in the quota market by bringing underlying values closer to the capped quota prices in Quebec and Ontario, we think it is time to introduce a cap on CDC support prices for dairy products.

Returns to Farmers and Efficiency Benchmarking

But what of the objective to provide efficient farmers with the opportunity to earn a fair return? Fair return to dairy farmers is currently embedded in the cost formula, which compensates for a farmer's own time and management costs, along with a factor for return on equity. However, the CDC's cost surveys do not focus on the efficient farmer, but on the average farmer, although it is true that results from a few outlying farms (exhibiting very high costs and very low costs per hectolitre) are excluded from the average cost computations that in turn feed into the formula for the price of milk. In order to better focus on efficient farms (and encourage laggards to become more efficient), the CDC should be compelled to benchmark the efficiency of the average Canadian farm against a majority among a sample of dairy farms and against farms outside Canada that can earn a "fair return" at a lower farm-gate price with similar input costs as the average Canadian farm.[25]

Benchmarking is neatly described in a PEI government publication as follows: "The aim of benchmarking is is to find the business that does things better than you. When you find better results, you must then determine how to do it better" (PEI 1996). As long as the average Canadian farm does not meet the benchmark, prices should be capped as a way to encourage Canadian dairy farmers to find efficiencies that appear, from the

25 This formula would account for differences in costs that, to cite one example, may be due to different feed-grain subsidies in different jurisdictions.

data, to be achievable, in order to maintain or grow their net income.[26]

The Political Economy of Reform

In this section, we look at two reform paths most often suggested for Canada's supply-management system. Roughly, they are: reform driven by Canada's interest in accessing foreign markets through international trade negotiations; and abolition of the system, after a transition period, in the interest of consumers and other users of milk and dairy products. These two paths are not, of course, mutually exclusive.

International Trade-Driven Reform

Commentators favouring changes to Canada's supply-management practices often invoke the cost to exporters shut out of lucrative markets at the trade negotiating table as a result of Canada's intransigent position on supply management. But, at first blush, fundamental reforms driven explicitly by an international trade agenda seem politically out of the question. A recent case in point is the June 2011 federal Speech from the Throne, which stated: "In all international forums and bilateral negotiations, our Government will continue to stand up for Canadian farmers and industries by defending supply management."

As Mussel (2012) points out, it should be possible within the current system of supply management to simply relax the quotas on imported dairy products as part of the give-and-take of trade negotiations, while still leaving tariffs high enough that they would effectively keep out above-quota products.[27] But the aim of the next generation of trade agreements that Canada is hoping to join, such as those on a Trans-Pacific Partnership (TPP), is to reduce all tariffs to zero.

Canada can, thus, easily be put in a position in which it is forced to lower its prohibitive tariffs as a "take-it-or-leave-it" condition to conclude the TPP. As a result, the amount by which Canada's over-quota tariffs can be lowered but still keep imports out could evaporate quickly. What would Canada do then? It might well be able to stave off trade-policy-driven changes for a long time, but the trade liberalizing landscape exemplified by the TPP talks suggests that it would make sense for many Canadian farmers to support gradual reforms from within in a bid to become more competitive ahead of any change in import policy, rather than stake their future on a "do-or-die" defence of supply management. Indeed, this was strongly hinted at in the Pronovost Report:

> The Commission nevertheless believes that while defending this system, the agricultural and agrifood sector must also plan for the future and consider several options. Some have adopted an attitude of denial, believing that the mere fact of suggesting supply management could change could weaken their position and be interpreted as giving up the fight. But is such an attitude conducive to properly preparing for the future? (Pronovost 2008, 69.)

26 Formulas other than a price cap – for example, a formula based on change in a farm-input price index, minus some factor X representing achievable efficiency gains – could be used in a similar way if more rapid reforms are desired. Another option could be to change the random sampling methods of producers to keep the most efficient producers in the sample, year after year.

27 Another possible approach would be to lower above-quota tariffs just sufficiently to let in some significant imports attracting these (still) high tariffs and explicitly divert the revenues from these tariffs to dairy farmers to compensate them for the loss of market share. Although this so-called "efficient tariff" solution (Feenstra and Bhagwati 1982) could improve Canadians' standard of living by benefiting consumers while leaving farmers no worse off, it runs against farmers' insistence that they should not receive direct government subsidies.

In the spirit of this comment and recognizing the problematic effects of the current dairy-supply system on the industry's competitiveness, this *Commentary* suggests that we should not wait to be forced by trade negotiations to effect meaningful change. Indeed, neither the 2011 Speech from the Throne nor an often-cited unanimous House of Commons motion (Parliament of Canada 2005) that asks the government not to give up any protection for supply-managed sectors in WTO negotiations are explicitly directed at the possibility that Canada might want, unilaterally and for its own good, to reform supply management.

Abolition in the Interest of Consumers and Users

Notwithstanding the costs of Canada's supply-management system, opposition to its abolition remains notoriously entrenched. Encouragingly, Hall Findlay (2012) shows that only 13 electoral constituencies in Canada have a significant concentration (more than 300) of dairy farms and concludes that this makes reforming or dismantling the system less politically daunting than it may seem. However, rural support for supply management clearly extends well beyond dairy producers. The system indirectly provides income support and stability to rural, sparsely populated regions. For instance, nearly all industrial (non-fluid) dairy processing plants for products like cheese, butter and protein powders are located in rural regions, employing thousands of people nationwide. There are also shipping industries, veterinarians, vaccination services, breeders, feedlots and other local businesses, as well as lenders that depend to some degree on the stability of the dairy industry.

Is Compensation for Reforms Warranted?

Perhaps the most difficult question in any supply-system reform is whether farmers and others, many of whom have large capital tied up in their quotas, would be entitled to compensation for any losses. Dismantling or significantly reforming the system will require significant adjustments not only for the dairy farms and farming families that count quotas as a significant asset, but also on the part of communities that depend on related activities as well as the financial institutions that have lent to these farms and communities.

Even though individual quotas in Canada have come to be treated as a private asset by their holders, it is not realistic to think that governments would owe farmers – on behalf of all taxpayers – the entire currently inflated value of the quotas or even the continuation of a quota system. Even recent purchasers of quotas, who may have not earned enough to cover their investments, are aware of the risk posed by potential policy changes. Barichello et al. (2007) state that "it is unusual to compensate farmers for policy changes" for a number of reasons, including the fact that changes are typically introduced over a period of time and that those affected by the change often find ways over the long run to improve productivity.

Equity questions also arise. Others in the economy go out of business and workers that are displaced for a variety of reasons do not enjoy full compensation for these changes. And many dairy famers have enjoyed considerable benefits from the quota system over the years, so compensation for a reduction in capital gains arising from it would raise difficult equity questions.

Australian Dairy Reforms

Many commentators have held up the 2000 Australian overnight liberalization of its fluid milk market as a model for Canada (Lippert 2001, Hart 2005, Hall Findlay 2012). While such an approach – very little warning but some explicit transition assistance – might work in Canada, there are key practical differences between the Australian situation then and Canada's situation now.

First, Australia's producer subsidy equivalents were considerably smaller at the time of reforms

than Canada's protection is worth to its producers today. Hence, any equivalent compensation to Canadian farmers – which in Australia's case amounted to about three-years'-worth of subsidies financed by a special 11 cents/litre tax on milk for eight years – would cost considerably more.

Among other features of the Australian market at the time that accounted for the relatively low overall level of farmer support measures, was that only the fluid milk market was regulated. Industrial milk, which today accounts for most milk use in Australia and Canada, had undergone its own deregulation over a long period before fluid milk was finally deregulated. It was priced competitively and, indeed, there was in Australia a lively international trade in dairy products, including significant imports from New Zealand.

Australia at the time was also undergoing a major deregulatory and trade-opening phase, which lowered input costs to farmers (Harris 2005). Thus, transposing the Australian experience to the Canadian situation would not be straightforward.

Difficulties in Avoiding a Crash in Quota Value

Another proposed solution is the Robson and Busby (2010) scheme of gradually expanding the quantity of milk production allowed under the quota system. While it would trigger an immediate collapse in quota values, the mechanics of this scheme are perfectly workable.

The immediate impact on farmers' (and financial institutions') balance sheets, while large, could be cushioned via a temporary tax or new milk import tariff revenues that, as in the Australian case, could be capitalized by farmers with the help of government guarantees to banks. Such revenue measures could be used to fund either retirement from the industry or improve farm productivity.

The above two scenarios involve considerable and almost immediate disruptions to the system itself because they would be devoted explicitly to its abolition. These proposals have been made, and made in an intellectually convincing way, before. Yet while reform has proceeded apace in other jurisdictions, Canada continues to stand still. The trouble may be that framing the question in an "abolition-or-nothing" mindset entrenches resistance to much needed change. As this paper has argued, there are feasible and meaningful options for reform within the general constraints of the current system that could be tried first.

A Reform Proposal Within The Current System

As we have established, current milk practices in Canada artificially lower milk and dairy product consumption, harm the competitiveness of certain manufacturing and service sectors, limit Canada's export growth and negatively affect the long-term dynamism and competitiveness of the dairy farming industry itself. All these factors would militate in favour of the system's abolition. Nevertheless, as we have also seen, there are both domestic and trade policy considerations that suggest total replacement of the system may be a long time coming.

In light of these considerations, we propose a reform option immediately workable within the current system. The heart of our approach centres on the pricing formula, which drives the current system. The governance reforms and the price cap suggested above would begin to ensure that the interests of consumers and other users are taken into account by the regulator. They would encourage the industry to seek greater productivity. These changes can be introduced in a manner consistent with the goal of providing efficient farmers with an "opportunity to earn a fair return," could be accomplished without sacrificing quality and continuous supply objectives and most certainly would contribute to achieving the adequate supply objective set out in the *Canadian Dairy Commission Act*.

Other mechanisms than the ones currently in place under supply management could address

price and output instability, seasonal shortages and surpluses, or any problematic power imbalance between farmers and buyers of milk inherent to the dairy industry.[28] For example, in the United States, more market-oriented pricing has led to increased use of futures and options contracts by dairy market participants to manage price instability, "something their grains and livestock compatriots have been able to do for many years" (Jesse and Cropp, 2008, 1). And protection against anti-competitive behaviour by purchasers of milk in Canada, or from unfair subsidization by foreign producers, which is available to other industries under legislation of general applicability, could apply as well in this industry.

To be clear, this *Commentary* is not suggesting we ignore competitive issues that Canadian dairy farmers may face along the chain leading to consumers and processors. But we are saying that the current system, in addition to hurting the vast majority of Canadians economically, hinders the long-run competitiveness of dairy farmers and there is room to begin moving in a more competitive direction.

The three elements of our proposal, which together could be brought before Parliament as the *Dairy Supply Management Reform Act* would unfold as follows:

I. IMPROVE THE DAIRY COMMISSION'S GOVERNANCE

The Dairy Commission would be invigorated by appointees representing expertise in consumer and competition issues. Perhaps one qualified member would come from among public interest groups and another named by Industry Canada. The Industry Canada nominee could further be mandated to chair the commission. This would involve modifying section 3 (1) of the *Canadian Dairy Commission Act* to read (proposed changes are italicized):

3. (1) The Canadian Dairy Commission is constituted as a corporation consisting of a Chairperson, a Chief Executive Officer and *three* other *members, two of whom, including the Chair of the Commission, must be nominated by the governor-general in Council on the advice of the Minister of Industry, with a view to ensuring a balance of producer and user interests on the Commission.*

II. CAP SUPPORT PRICES

The Dairy Commission would not be allowed to institute increases for a key support price (butter or skim milk powder) until a benchmarking exercise such as the one sketched out above suggests Canadian farmers on average have achieved a degree of efficiency equivalent to that in comparable jurisdictions. Because provinces base their prices for industrial milk on the commission's support prices, limiting the commission's ability to increase key support prices will have a trickle down impact on industrial milk prices and, then, on fluid milk prices since all these products come from the same source. This nominal price ceiling would, relative to the current system, achieve a number of economic and political benefits:

- Consumers and processors would benefit from a fixed milk price that, as wages and other costs in the economy grow, will bring dairy prices toward a more internationally competitive level.
- Dairy farmers would not only be given time to adjust, but the adjustment would occur within the current system. Supply would continue to be managed, just not with an ever-increasing adjustment for costs in mind. Relatively efficient farmers will have ongoing opportunities to expand and prosper.
- Neither farmers nor financial institutions that have lent to farmers would need to worry about collapsing cash flow and hence the status of loans backed by quotas.

28 Those include increased vertical integration of the industry, as in New Zealand, or horizontal integration of farms (Doyon 2011, p. 18).

- Farmers could continue to increase the value of their operations through rising productivity, which there would now be a greater incentive to improve.
- Canada could allow more milk and dairy imports to the extent this will be needed to balance supply with demand at existing support prices, but it would not need to commit to those new import levels, and would thus retain a free hand in international trade negotiations.
- As in the current system, farmers or governments need not collect or exchange money from each other, a key concern of dairy farmers who do not want to be subject to the politics of government budgetary decisions.
- And last, but not least, the system would be consistent with the House of Commons resolution supporting Canada's supply-managed system – it would only be managed differently.

This could be achieved by modifying the *Canadian Dairy Commission Act*, Article 9 (1) (which describes the powers of the Commission) to read, at g) (proposed changes are italicized):

> "establish the price, or minimum or maximum price, paid or to be paid to the Commission, or to producers of milk or cream, the basis on which that payment is to be made and the terms and manner of payment that is to be made in respect of the marketing of any quantity of milk or cream, or any component, class, variety or grade of milk or cream; *but no increase in the minimum or support price set by the Commission for any commodity will be instituted unless the Commission periodically sets a benchmark for an efficient Canadian dairy farm at a competitive level against farms facing comparable input costs, nationally or internationally, and the average Canadian dairy farm productivity reaches the level of this efficient benchmark.*"

III. LET CANADIANS COMPETE

A peculiar feature of the current system is how severely it limits the ability of Canadians to sell or buy milk across provincial boundaries. As mentioned, this feature of the system, which contributes to the low productivity of Canadian farms, requires federal constitutional powers over internal Canadian trade to be delegated to the provinces. We propose that the federal government reclaim this power, which would involve repealing Section 3 of the Ontario Milk order issued under the federal *Agricultural Products Marketing Act* and the equivalent part of similar orders issued by other provinces.

Furthermore, we propose, as a matter of policy that the federal government:

- enable Canadian farmers wishing to operate outside of the supply-management system, as long as their production is for export only; and,
- indicate that it will support, as consistent with Section 121 of the *Constitution Act*, 1982, an application by any one province for its producers to begin freely exporting milk and dairy products to another province.

CONCLUSION

In this *Commentary*, we have examined the relationship between the objectives of the Canadian Dairy Commission and relevant outcomes of the supply-management system that it oversees. We have found that achieving the commission's legislated objectives requires fewer constraints on the production and trade of milk and dairy products than imposed by the current supply-management system. Current constraints impose significant and unnecessary costs on Canadians and increasingly raise long-term viability issues within the dairy industry itself.

At the same time, the political feasibility of quickly unwinding the Canadian dairy supply-management system remains hypothetical. The length and outcome of international trade negotiations that might bring the benefits of lower prices to Canadian consumers and users of milk, and of open export markets to Canadian producers, remain subject to important uncertainties.

Given these findings, the federal government should institute reforms within the context of

continued supply management that will begin offering relief to consumers and other milk users. These reforms should also appeal to dairy producers and their lenders who are concerned not only about the immediate financial stability of their business, but about the long-term growth and competitiveness of their industry.

Our key reform suggestions are improving the CDC's governance to better reflect the interest of dairy users, a cap on key support prices for milk and dairy products and opening the door to exports and to more interprovincial trade in milk. These changes would begin to address the costs of the system and strengthen Canada's dairy and dairy product industries' competitive position, ahead of what we expect will be, in the long run, greater openness to the international marketplace through the TPP and other international negotiations.

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